BULLETIN

OF THE INSTITUTE OF METALS

VOLUME 1 OCTOBER 1951 PART 2

GENERAL MEETINGS OF THE INSTITUTE

ABRIDGED REPORT OF A SPECIAL COMMITTEE APPOINTED BY THE COUNCIL

UNDER the Chairmanship of Dr. C. J. SMITHELLS, Senior Vice-President, a special committee appointed by the Council has recently held a series of meetings to consider, in the light of changes of circumstances since the formation of the Institute, and having in mind the financial aspects of these matters, all questions relating to the organization of General Meetings. The committee of eight members was representative of the different interests within the Institute, including production metallurgists and metallurgical engineers, research workers, university and technical college staffs, specialists, and Junior and Student Members.

It is thought that Members may be interested to have some details of the committee's report and of its recommendations which have been accepted by the Council. They are therefore given below in much abbreviated form.

Needs of Members as Regards Meetings

The needs of the various classes of members as regards General Meetings of the Institute are:

(a) *Production Metallurgists and Metallurgical Engineers.*—(i) Symposia on production practice; (ii) review-type papers (at present provided to some extent by papers contributed to symposia on industrial subjects); (iii) more papers on plant and plant developments (which papers should be encouraged or—if not otherwise received in sufficient numbers to meet the needs of this class of members—invited); (iv) visits to works, &c.; and (v) social functions, to facilitate personal contacts.

(b) *Research Workers in General.*—(i) Papers describing fundamental work over wide fields of interest; (ii) visits to works and laboratories; and (iii) social functions, to facilitate personal contacts.

(c) *Specialists.*—(i) Facilities to discuss topics of common interest, even though the total numbers present may be very small (such discussions could take place concurrently with other meetings at which the subjects under discussion were sufficiently diverse); (ii) visits to works and laboratories; and (iii) social functions, to facilitate personal contacts.

(d) *Junior and Student Members.*—Undergraduates and post-graduate students in their first year really have no need for meetings, other than those of the University Metallurgical Societies. The Institute meets their needs with the Library, the *Journal*, *Metallurgical Abstracts*, and the Monograph Series. After obtaining their first appointments, however, and for post-graduate students after their first year, meetings could provide Junior and Student Members with useful, and even very valuable services. Though they may not be ripe enough in experience to present papers, Junior and Student Members could (and should be encouraged to) take part in discussions, and Local Sections can usefully cater for their needs by having one " Students' Night " in each session. As they gain experience, Junior and Student Members are in as good a position as others to present papers and take part in discussions. Students' Tours, and visits to works and laboratories (arranged by the parent body or by Local Sections) would be valuable services.

Committee's Recommendations

Place of Meeting.—As the amenities, and general atmosphere, of accommodation at an hotel are much to be preferred to those in the buildings of even the largest scientific societies, and the difference in cost is very small, General Meetings should be held in hotels.

Concurrent Sessions.—To ensure that as many as possible of the papers published in the *Journal* are discussed, concurrent sessions may often be desirable at General Meetings; there is nothing against them, provided that the subjects discussed are sufficiently diverse.

General Meetings.—Two main meetings should be held each year, viz. the Annual General Meeting and the Autumn Meeting. In addition, when invited to do so, the Institute should arrange one-day or half-day meetings in Local Section areas for the presentation and discussion of papers previously published in the *Journal*. These meetings (which would be meetings of the parent body), and any social functions in connection with them, should be organized by the Secretary and his staff.

May Lecture.—The present isolation of the May Lecture makes attendance difficult, on grounds of expense. It should be delivered, with title unchanged, in connection with the Annual General Meeting.

Annual General Meetings should be held in London, in March, on the following lines:

Day 1. May Lecture, in the evening.
Day 2. *Morning*: Business meeting; Presidential Address; Luncheon (at which medals would be presented). *Afternoon*: Discussion of scientific papers. *Evening*: Dinner-Dance at an hotel.
Day 3. All-Day Symposium on a subject of interest to production metallurgists and metallurgical engineers. *Evening*: Conversazione, with music and possibly an exhibition.
Day 4. *Morning*: Discussion of scientific papers. *Afternoon*: Visits to works and laboratories.

Autumn Meetings should be held in September and, when practicable, after the beginning of the children's school term and before the beginning of the University term. The time at which these meetings can be held may, however, depend on the locality (e.g. when college or hostel accommodation can be made available) or the wishes of the Institute's hosts.

Of every three Autumn Meetings, one should be held abroad; one should be a normal General Meeting in the provinces; and one should be a meeting in London, with extensions to the provinces, in connection with which an invitation would be extended to a foreign metallurgical society to hold its meeting side by side with that of the Institute.

When an Autumn Meeting is held abroad, a General Meeting should also be held in London, about 3 or 4 weeks afterwards, for the discussion of scientific papers.

Autumn Meetings in Great Britain should normally last from Monday to Friday, inclusive; abroad, the duration of meetings will depend on varying circumstances. An Autumn Lecture should be invited, but no symposia should be arranged at Autumn Meetings, at which the social side and works visits should be emphasized. Visits to works, laboratories, and places of cultural interest should be arranged for members and ladies. A dinner-dance should be held, at which the Institute can return any local hospitality.

Symposia.—Papers contributed to symposia should be distributed 3 to 4 weeks before the meeting, to stimulate discussion. A rapporteur should summarize the papers, which should not be separately presented by the authors. Successful General Discussions can, however, be held without the preprinting of papers.

Visits to Works and Laboratories.—All classes of members need to have visits to works and laboratories arranged for them, and they should be organized in connection with Annual General Meetings as well as Autumn Meetings. Our hosts should be advised that activities which may not be considered to be of interest to experienced members may, in fact, be of great interest to Junior and Student Members (e.g. the planning and progress of work through the factory).

Social Functions.—A dinner-dance (evening dress), at an hotel, should be arranged in connection with each Annual General Meeting; there is a strong demand for such a function among certain classes of members. Allowing for overheads, the present cost of such functions will be 25*s.* to 35*s.* per head. A dinner-dance is more attractive to members than a dinner. The difference in cost between a buffet dance at an hotel and a dinner-dance does not make the former type of function worth while.

Lunches.—Buffet lunches are not popular. Luncheons should not be organized in connection with Autumn Meetings, but one should be arranged in connection with each Annual General Meeting, at which medals will be presented. The cost, including overheads, will be about 18*s.* 6*d.* per head at present prices. The advantages of presenting medals at a luncheon greatly outweigh the disadvantages.

The Secretary should provide members with a simple guide (with prices) to restaurants and inns at which members may obtain lunch near to the place of meeting.

Conversazione.—A conversazione is the only type of function that can be arranged to meet the needs of those with slender means. In connection with each Annual General Meeting there should be a conversazione, with music and possibly an exhibition. Members would be required to bear only the cost (about 3*s.* 6*d.* per head, at present prices) of the very simple light refreshments provided.

Cost of Social Functions: General.—The cost of entertaining official guests should be borne by the Institute and not by the members taking part in the function to which they are invited. The price charged for tickets for social functions (as, also, for visits to works and laboratories) should otherwise cover all expenditure by the Institute on such functions, including overheads.

After having examined information obtained from a wide range of hotels, restaurants, and caterers in London regarding the accommodation that can be made available and the charges they would make for various types of function, the Committee is satisfied that, though some restaurant and hotel proprietors can—for obvious reasons—make low or modest charges for lunches and dinners served daily in their rooms open to the public (where several meals in succession may be served at the same table by their permanent staff of waiters), the overheads associated with the provision of the necessary accommodation for exclusive use and the costs of engaging temporary staff, make it impossible in present times to arrange dinner-dances, dinners, and luncheons for large numbers at small cost.

INSTITUTE NEWS

General Meeting, London, 17 and 18 October 1951

Tuesday, 17 October

GENERAL DISCUSSION ON "METAL ECONOMICS"

As previously announced, a General Discussion on "Metal Economics" will be held at the Park Lane Hotel, Piccadilly, London, W.1, on Tuesday, 17 October 1951. The President, Professor A. J. Murphy, M.Sc., will occupy the Chair.

The meeting will be divided into two half-day sessions. At each session several short papers will be presented, after which there will be a General Discussion on the subject of the Session. A document giving synopses of the papers to be presented at the meeting has been dispatched to all Members resident in the British Isles. Other Members who can attend are requested to apply for copies. Visitors will be welcome, and in view of the importance of the subject, it is hoped that there will be a large attendance. The programme is as follows:

Session I.—Primary Resources of Ferrous and Non-Ferrous Metals (10 a.m.–12.45 p.m.)

(i) The President: Opening Address.
(ii) Mr. R. Lewis Stubbs (*British Non-Ferrous Smelters' Association*): "The World Supply of Non-Ferrous Metals, Including the Light Metals".

(iii) Professor S. ZUCKERMAN, C.B., F.R.S. (Birmingham University): "Metals as Natural Resources".
(iv) Dr. T. P. COLCLOUGH, C.B.E. (*British Iron and Steel Federation*): "Iron Ore: World Demand and Resources".
(v) General Discussion on Primary Resources.

SESSION II.—SCRAP RECLAMATION, SECONDARY METALS, AND SUBSTITUTE METALS (2.30–5 p.m.).

(i) Mr. C. A. BRISTOW, Mr. A. J. SIDERY, and Dr. H. SUTTON (*Ministry of Supply*): "The Scope for Conservation of Metals, Ferrous and Non-Ferrous".
(ii) Mr. C. DINSDALE (*British Railways*): "Economy by Standardization of Alloys and of the Method of Reclamation of Scrap Metals".
(iii) Mr. F. HUDSON (*The Mond Nickel Co., Ltd.*): "The Influence of Specifications on Productivity and the Economic Utilization of Ferrous and Non-Ferrous Metals".
(iv) Mr. E. H. JONES (*Capper Pass and Son, Ltd.*): "Secondary Heavy Metals".
(v) Colonel W. C. DEVEREUX, C.B.E. (*Almin, Ltd.*): "Secondary Aluminium and Magnesium".
(vi) General Discussion on Scrap Reclamation, Secondary Metals, and Substitute Metals.

CONVERSAZIONE

In the evening (8–11 p.m.) there will be an informal (lounge suits) conversazione at the Institute's headquarters, 4 Grosvenor Gardens, London, S.W.1, at which there will be a small exhibition of apparatus, equipment, specimens, and recent books likely to be of interest to members.

A charge of 3*s.* 6*d.* will be made to cover the cost of simple light refreshments, and alcoholic drinks will be obtainable. Members wishing to attend the conversazione are requested to send the necessary remittance to the Secretary, from whom tickets are obtainable both for members and their guests.

Wednesday, 18 October

VISITS TO WORKS

By kind invitation of the Directors, visits to the following works (including lunch) have been arranged for members attending the meeting. A charge will be made to cover transport and administrative expenses, and tickets must be obtained from the Secretary in advance.

Members wishing to take part in one of these visits (the total number in each case is limited) are requested to advise the Secretary (on the form already circulated), stating their order of preference, and sending the appropriate remittance.

Transport will leave 4 Grosvenor Gardens, London, S.W.1, at the times stated.

Time of Departure	*Works*
9.30 a.m.	(1) Enfield Rolling Mills, Ltd., and Enfield Cables, Ltd., Brimsdown, Middlesex. (Ticket price 5*s.*)
9.30 a.m.	(2) High Duty Alloys, Ltd., Slough. (Ticket price 5*s.*)
9.30 a.m.	(3) Telegraph Construction and Maintenance Co., Ltd., Greenwich. (Ticket price 5*s.*)

Annual General Meeting, London, 25, 26, and 27 March 1952.

The next Annual General Meeting of the Institute will be held in London on Tuesday, Wednesday, and Thursday, 25, 26, and 27 March 1952.

The provisional programme is as follows:

Monday, 24 March

May Lecture.

Tuesday, 25 March

Location: Park Lane Hotel, Piccadilly, London, W.1.

10.0 a.m.—General business of the Institute.
Report of Council.
Report of the Honorary Treasurer.
Induction of the new President.
Presidential Address, by Dr. C. J. Smithells, M.C.
12 noon.—Adjournment; drinks will be served in an anteroom.
1.0 p.m.—Luncheon at the Park Lane Hotel, followed by Presentation of the Institute of Metals (Platinum) Medal, the W. H. A. Robertson Medal, and the Rosenhain Medal.
2.45 p.m.—Scientific session; discussion of papers.
5.0 p.m.—Adjournment.
Evg.—Dinner-Dance at the Park Lane Hotel.

Wednesday, 26 March

Location: Park Lane Hotel, Piccadilly, London, W.1.

9.30 a.m.–12.45 p.m.; 2.30–5.0 p.m.—Symposium on "Equipment for the Thermal Treatment of Non-Ferrous Metals and Alloys" (invited papers will previously have been published in the *Journal*).
Evg.—Conversazione and exhibition at 4 Grosvenor Gardens, S.W.1.

Thursday, 27 March

Location: Park Lane Hotel, Piccadilly, London, W.1.

10.0 a.m.–12.30 p.m.—Scientific session; discussion of papers.
Aft.—Visits to works and laboratories.

Symbols and Abbreviations in "Metallurgical Abstracts"

The Council has decided, in the interests of economy, on an extension of the use of symbols and abbreviations in *Metallurgical Abstracts*. Beginning last month, the chemical symbols will replace the names of the elements throughout the abstracts, and chemical formulæ will be used instead of the names of common inorganic compounds. In addition, a number of words that appear repeatedly in the abstracts will in future be abbreviated. A full list of symbols and abbreviations will be found facing the first page of *Metallurgical Abstracts*.

Journal Binding Costs

Mr. W. A. Newark, of 2 Clerkenwell Green, London, E.C.1., to whom many Members send their *Journals* for binding, announces that, owing to increases in costs, the charge for binding each volume in the old 8vo size will in future be 6*s.* 3*d.*, inclusive of postage to Members' addresses.

The price per volume in the new 4to size will be 10*s.* 3*d.*, inclusive of postage.

Binding cases for the volumes for 1945, 1946, 1947, 1948, and 1948–49 are still available (*free*) to Members on request to the Secretary.

Election of Members

The following 21 Ordinary Members, 4 Junior Members, and 3 Student Members were elected on 9 August 1951 :

As Ordinary Members

AMÉEN, Einar Louis, Managing Director, Surahammars Bruks Aktiebolag, Surahammar, Sweden.

ANDRESEN, Erling, Stavanger Electro-Staalverk A/S, Jörpeland, Norway.

BROADBENT, Brian Lynn, Thomas Broadbent and Sons, Ltd., Central Ironworks, Huddersfield, Yorks.

CHANDLER, Henry, Vice-President, Vanadium Corporation of America, 420 Lexington Avenue, New York 17, N.Y., U.S.A.

CLAYTON, William Wikeley Ward, M.I.Mech.E., Chairman and Managing Director, Hudswell, Clarke and Company, Ltd., Railway Foundry, Jack Lane, Leeds 10.

CORFIELD, Reginald Holbeche, B.A., Managing Director, Corfield-Sigg, Ltd., and Corfield and Buckel, Ltd., Trafalgar Works, Station Road, Merton Abbey, London, S.W.19.

DAVIES, Ivor Bowen, In Charge of Light Alloy Test House, Richard Thomas and Baldwins, Ltd., Byass Works, Port Talbot, Glam.

DEWHIRST, Eric Victor, A.I.M., Chief Metallurgist, Specialloid, Ltd., Black Bull Street, Leeds 10.

DURAN RIGOL, Enrique, Ingeniero Industrial, Productos AGMA, S.A., Refineria de Aluminio, Ronda San Pedro, 32, 1, A, Barcelona, Spain.

GIFKINS, Robert Cecil, B.Sc., A.I.M., Research Officer, Commonwealth Scientific and Industrial Research Organization, Baillieu Laboratory, University of Melbourne, Carlton N.3, Vic., Australia.

HANCOCK, Peter Francis, B.A., F.I.M., Chief Metallurgist, Birlec, Ltd., Tyburn Road, Erdington, Birmingham 24.

HOGAN, Leonard McNamara, B.Sc., Student, Metallurgy Department, University of Melbourne, Melbourne, Vic., Australia.

KIRKUP, William Brookes, T.D., B.A., G.I.Mech.E., Brass Rolling and Extrusion Mill Engineer, Vickers-Armstrongs, Ltd., Elswick, Newcastle-on-Tyne 4.

LEROY, André Georges Paul, Directeur, Institut de Soudure, 32 Boulevard de la Chapelle, Paris 18e, France.

MALCOR, Henri, 12 rue de la Rochfoucauld, Paris 9e, France.

MATUSCHKA, Bernhard, Dr.Mont.Ing., Consulting Engineer, Vereinigte Österreichische Eisen und Stahlwerke, Linz, Austria.

MUIR, Neil Baird, B.Sc., A.I.M., Technical Officer (Metallurgical), Research Department, Imperial Chemical Industries, Ltd., Metals Division, Kynoch Works, Witton, Birmingham 6.

PLANTEMA, Frederik J., Ing., Acting Chief, Materials Section, Nationaal Luchtvaartlaboratorium, Sloterweg 145, Amsterdam-W., Holland.

RIDGE, Charles William, O.B.E., Assoc.Met., F.I.M., General Manager, Scaw Metals, Ltd., P.O. Box 6334, Johannesburg, Transvaal, South Africa.

STAPLES, Ronald Thomas, Production Metallurgist, T.I. Aluminium, Ltd., Redfern Road, Tyseley, Birmingham 11.

VARGAS, Fernando Gonzalez, Professor of Metallurgy at the Universidad Nacional Autonoma de México, and at the Instituto Politecnico Nacional, Mexico City; mail: 2a Priv. C. Beistegui 14 Col. Valle, Mexico 12, D.F.

As Junior Members

AULD, John Hugh, B.Met.E., Metallurgist, Metallurgy Department, Royal Aircraft Establishment, Farnborough, Hants.

MCKINLAY, D. F. A., Electrometallurgist, Standard Telephones and Cables, Ltd., New Southgate, London, N.11.

PITTS, Gordon Roy, B.Sc., G.I.Mech.E., Metallurgist, Bristol Aeroplane Co., Ltd., Aircraft Division, Filton, Bristol.

VAUGHAN, Thomas Bernard, Metallurgist, Walter Somers and Co., Ltd., Halesowen, Birmingham.

As Student Members

EVANS, Ronald Ernest, Trainee, Research Department, Imperial Chemical Industries, Ltd., Metals Division, Witton, Birmingham 6.

HINES, John Grahame, B.A., Research Student, Department of Metallurgy, The University, Pembroke Street, Cambridge.

TAYLOR, Ian, Laboratory Assistant, Fulmer Research Institute, Ltd., Stoke Poges, Bucks.

The following 24 Ordinary Members, 4 Junior Members, and 4 Student Members were elected on 4 September 1951 :

As Ordinary Members

ARDERN, Lawrence L., Librarian, College of Technology, Manchester 1.

BINDER, William Oakley, B.S., Research Metallurgist, Union Carbide and Carbon Research Laboratory, Inc., P.O. Box 580, Niagara Falls, N.Y., U.S.A.

COLMANT, Raymond, Works Director, Sollac, Seremange, (Moselle), France.

CROOKS, Laurence Edward, Chief Control Officer, Control Commission for Germany, Metallurgical Industries Department, Land Commissioner's Office, Düsseldorf, B.A.O.R., 4.

DAWIHL, Walther, Dr.Ing.habil., Société Franco-Sarroise de Métaux Durs, Ursulinenstrasse 43, Sarrebruch/Sarre.

DEVEREUX, Wallace Deane, Structural and Mechanical Development Engineers, Ltd., Slough, Bucks.

ELSTUB, St. John, B.Sc., Production Director (Wrought Metals), Imperial Chemical Industries, Ltd., Metals Division, Witton, Birmingham 6.

FERRALL, Lorin L., Director of Metallurgy, Crucible Steel Company of America, P.O. Box 88, Pittsburgh 30, Pa., U.S.A.

FLETCHER, Frank, B.Sc., Research Engineer, Hopkinson's, Ltd., Huddersfield.

GOICOECHEA, Manuel, Director and General Manager, Hierro Maleable de Mexico, Viena no. 16-Department 12, Mexico City, Mexico.

GRAHAM, Robert, Ph.D., B.Sc., A.R.T.C., Metallurgist, Shell Refining and Marketing Co., Ltd., Thornton Research Centre, P.O. Box 1, Chester.

HOUGHTON, Frank, Director, Pickford, Holland and Co., Ltd., Sheffield.

JOLIVET, Henri, Service Général des Recherches, Société d'Electro-Chimie, 10 rue du Général Foy, Paris 8e, France.

MARTINEZ, Giorgio, M. A., Director, Barron and Crowther, Ltd., Eastleigh, Hants.

NOURSE, Louis M., A.B., M.S., Librarian, St. Louis Public Library, St. Louis 3, Mo., U.S.A.

OWE, Aage W., Managing Director, A/S Ardal og Sunndal Verk, Nedre Vollgate 4, P.O. Box 180, Oslo, Norway.

PRICE, Bartlett R., Westinghouse Electric Corporation, East Pittsburgh, Pa., U.S.A.

SANDSTRÖM, Karl Eric Viktor, Chairman, S. and M. Engineering Pty., Ltd., 88 Fox Street, Johannesburg, Transvaal, South Africa.

SHERWOOD, Charles Noel, B.Comm., Public Relations Officer, Metals Division, Imperial Chemical Industries Ltd., Witton, Birmingham 6.

TAGLIAFERRI, Leone, *Ing.*, General Manager, Leone Tagliaferri & C.S.p.A., via Principe Eugenio 11, Milan, Italy.

TENLAND, Waldemar, *Eng.*, Hedåsvägen, 47d, Sandviken, Sweden.

VANICK, James Sebold, B.S., International Nickel Company, Inc., 67 Wall Street, New York 5, N.Y., U.S.A.

WHITE, Charles M., President, Republic Steel Corporation, Room 1707, Republic Building, Cleveland 1, O., U.S.A.

WILLNERS, Sven Harry, A.B. Ferrolegeringar, P.O. Box 16150, Stockholm 16, Sweden.

As Junior Members

BROWN, Derek James, B.Sc., Metallurgist, Magnesium Elektron, Ltd., Clifton Junction, near Manchester.

DEVEREUX, Robert Wayne, Assistant to Works Superintendent, Southern Forge, Ltd., Langley, Bucks.

HAGEL, William P., B.Met.Eng., Junior Metallurgist, Oak Ridge National Laboratory, Oak Ridge, Tenn., U.S.A.

HARRIS, Ian Robert, Research Metallurgist, The British Aluminium Company, Ltd., Chalfont Park, Gerrards Cross, Bucks.

As Student Members

CINA, Bernard, Student of Metallurgy, Sheffield University.

HOLDER, Sydney George, Jr., M.Sc., Student of Metallurgy, University of Tennessee, Knoxville, Tenn., U.S.A.

LIU, T. S., M.S., Graduate Student, University of Notre Dame, Ind., U.S.A.

THOMAS, W. Roy, M.A.Sc., Graduate Student, University of Toronto, Canada.

PERSONAL NOTES

DR. F. ADCOCK is now Chief Research Officer to the Broken Hill Proprietary Co., Ltd., Australia.

MR. F. E. ASBURY has been awarded the B.Met. degree of Sheffield University.

MR. U. G. BHAT has received a Master's degree in Metallurgical Engineering Practice at Lehigh University, Bethlehem, Pa., and is now working for his Ph.D.

MR. S. BINNER has left Stewarts and Lloyds, Ltd., Corby, and taken up a position with the Ministry of Supply, Atomic Energy Production, Sellafield, Cumberland.

MR. A. J. BOURNE, who has been connected with the Company since 1908 and for the past 27 years has been Works' Manager, has been elected a Director of Earle, Bourne and Co., Ltd., of Birmingham.

MR. R. R. BROOKS, Metallurgical Superintendent, Commonwealth Aircraft Corporation Pty., Ltd., Melbourne, is on a business trip to England.

MR. J. M. CAPUS has been awarded the degree of B.Sc. (2nd Class Honours) in Industrial Metallurgy at Birmingham University.

MISS S. CONSTANTINE is now Chief Chemist to M. L. Alkans, Ltd., Greenford, Middlesex.

DR. MAURICE COOK has been appointed Joint Managing Director of the Metals Division, Imperial Chemical Industries, Ltd. He has also been appointed a Vice-Chairman of the British Non-Ferrous Metals Research Association.

MR. P. CUTLER has been appointed Superintendent, Ordnance Factory, Muradnagar, Meerut, U.P., India.

MR. A. DANDO has been appointed a Vice-Chairman of the British Non-Ferrous Metals Research Association.

MR. R. C. DAVIDSON, who recently graduated B.Sc. in the University of Melbourne, has been appointed Metallurgist to David Duncan and Co., ironfounders, Melbourne.

MR. T. J. DENNIS has been appointed Production Superintendent at the Byass Light Alloy Works of Richard Thomas and Baldwins, Ltd., Port Talbot. He obtained the B.Sc. degree with first-class Honours in Industrial Metallurgy at Birmingham University last July.

MR. J. P. DENNISON has been appointed Lecturer in Metallurgy at the University College, Swansea.

MR. H. B. DUNTHORNE has left England for Canada on his appointment as metallurgist in the Gas Turbine Engineering Division Laboratory of A. V. Roe (Canada) Ltd., Malton, Ont.

MR. A. M. EDGE has been awarded the B.Met. degree of Sheffield University.

MR. R. D. HAMER has been appointed to fill a casual vacancy on the Council of the British Non-Ferrous Metals Research Association.

MR. V. C. HANSON has become Managing Director of Kent Alloys, Ltd., Rochester, Kent.

MR. G. T. HARRIS has been appointed Research Manager of Messrs. William Jessop and Sons, Ltd., Sheffield.

MR. T. HEWITT has left British Copper Refiners, Ltd., Prescot, and joined the Smelting Company (Egypt), S.A.E., Cairo.

DR. W. R. HIBBARD, JR., formerly Assistant Professor of Metallurgy at Yale University, is now a Research Associate in the laboratories of the General Electric Co., Schenectady, N.Y.

MR. G. W. HORSLEY has joined the Metallurgy Division, Atomic Energy Research Establishment, Harwell.

DR. B. T. HOULDEN has left the British Non-Ferrous Metals Research Association and joined John Dale, Ltd.

MR. B. P. JAMES has been awarded the B.Met. degree of Sheffield University and has taken up a Short-Service Commission in the Education Branch of the Royal Air Force.

MR. V. B. JOHN has graduated B.Sc. in Metallurgical Chemistry at University College, Cardiff.

MR. J. R. LEE has been awarded the degree of B.Sc. in Industrial Metallurgy at Birmingham University.

MR. H. R. MASON, a recent B.Sc. graduate of Melbourne University, has joined the staff of the Broken Hill Proprietary Co., Ltd., Newcastle, N.S.W.

MR. A. D. MICHAEL has been appointed an Investigator in the Mechanical Testing Section of the British Non-Ferrous Metals Research Association. He was previously with J. Stone and Co., Ltd.

DR. R. H. MYERS, who has recently been working at the Atomic Energy Research Establishment, Harwell, has been appointed the first Professor of Metallurgy in the University of Sydney.

MR. N. P. PINTO has joined Rem-Cru Titanium, Inc., Midland, Pa.

MR. P. POTTER has taken up an appointment with H. J. Enthoven and Sons, Ltd., Rotherhithe.

DR. J. N. PRATT has resigned his post as University Research Fellow in the Department of Metallurgy of the University of Birmingham, to take up an appointment as a Research Fellow in the Department of Metallurgical Engineering in the University of Toronto. His new address is Department of Metallurgical Engineering, University of Toronto, Toronto S, Ont., Canada.

MR. ERIC RAYBOULD has relinquished his position as Chief Metallurgist, Foundry Division, High Duty Alloys, Ltd., Slough, and has been appointed Foundry Manager with Messrs. H. M. Hobson, Ltd., Wolverhampton.

PROFESSOR G. V. RAYNOR has been appointed a Visiting Professor of Metallurgy for the session 1951–52 at the University of Chicago, and will be working at the Institute for the Study of Metals, Chicago 37, Ill. In connection with this appointment, Professor Raynor has been selected by the Board of Foreign Scholarships for a Fulbright Award and by the Department of State for a Smith–Mundt Award.

MR. S. F. REITER has received the degree of D.Eng. (Metallurgy) of Yale University and is now on the staff of the Research Laboratory of the General Electric Co., Schenectady, N.Y.

MR. LYNN G. RICHARDS is now at the U.S. Naval Engineering Experiment Station, Annapolis, Md.

MR. N. B. RUTHERFORD has been transferred from the Melting and Casting Section to the Liaison Department of the British Non-Ferrous Metals Research Association.

DR. RICHARD SELIGMAN (Past President and a Fellow of the Institute), founder and chairman of The A.P.V. Co., Ltd., has been presented by his workpeople and staff with a bronze plaque bearing a representation of his head in profile and the words "Presented by those who work for him as a token of their high regard." It is proposed to mount the plaque in the new works now being constructed for the firm at Crawley, Sussex.

On 22 October, Dr. Seligman is to receive the gold medal of the Society of Dairy Technology. This medal, which is awarded not more than three times in ten years, is for distinguished service to the dairy industry in any part of the world.

DR. DANA W. SMITH has been appointed Associate Director of the Division of Metallurgical Research, Kaiser Aluminum and Chemical Corpn., Spokane, Wash.

MR. P. W SMITH has resigned his post with Murex (Australasia) Pty., Ltd., on appointment as an Examiner of Patents, with the Department of Patents, Canberra.

MR. L. J. STONE, who for the last few months has been on a business visit to England, has returned to Australia. Mr. Stone is Process Superintendent at Commonwealth Aircraft Corporation Pty., Ltd., Melbourne.

DR. ROY E. SWIFT has joined the faculty of the Department of Mining and Metallurgical Engineering of the University of Kentucky, Lexington, Ky. He was formerly on the staff of the Mackay School of Mines of the University of Nevada, Reno, Nev.

MR. JULIAN S. TRITTON, a partner in Messrs. Rendel, Palmer, and Tritton, consulting engineers, has been elected President of the Institution of Locomotive Engineers for 1951–52.

MR. H. VICKERS has left King's College, Newcastle, and taken up an appointment with the Ministry of Supply, Division of Atomic Energy, Risley, near Warrington.

PROFESSOR H. K. WORNER has been appointed by the Victorian Governor-in-Council as a member of the Council of the Swinburne Technical College, Melbourne.

Note: Will members (in addition to informing the Institute's administrative department of changes of address, occupation, &c.) kindly notify the Editor, *separately*, of all changes of occupation, appointments, awards of honours and degrees, &c., as these matters interest their fellow members.

JOINT ACTIVITIES

Capper Pass Awards

The Capper Pass Awards, which are made annually from a sum of £200 placed at the disposal of the Councils of the Institution of Mining and Metallurgy and of the Institute of Metals by Capper Pass and Son, Ltd., Bristol, are as follows:

(*a*) £100 per annum for one or more awards to authors of papers on some aspect of non-ferrous extraction metallurgy.

(*b*) £100 per annum for one or more awards to authors of papers relating to some process or plant used in the fabrication of non-ferrous metals.

The Adjudicating Committee will meet early in each year to consider all papers published by both societies during the previous year. Papers on extraction metallurgy should be offered to the Institution of Mining and Metallurgy and papers on fabrication to the Institute of Metals. Authors need not be members of either society, and may be resident in any country. MSS. should preferably be submitted in duplicate to either the Secretary, Institution of Mining and Metallurgy, Salisbury House, Finsbury Circus, London, E.C.2, or the Secretary, The Institute of Metals, 4 Grosvenor Gardens, London, S.W.1, from whom further particulars may be obtained.

NEWS OF KINDRED SOCIETIES

Symposium on the Corrosion of Buried Metals

A Symposium on the Corrosion of Buried Metals, organized by the Iron and Steel Institute in conjunction with the British Iron and Steel Research Association and the Corrosion Group of the Society of Chemical Industry, will be held at the offices of the Iron and Steel Institute, 4 Grosvenor Gardens, London, S.W.1, on Wednesday, 12 December 1951. Sir Charles Goodeve, O.B.E., D.Sc., F.R.S., Director of the British Iron and Steel Research Association, will be in the Chair. The sessions will begin at 10.0 a.m. and 2.30 p.m. and will be open to all interested in the subject under discussion.

The papers will be presented in brief individually and discussed in groups, as indicated in the programme below. A buffet luncheon will be available in the Library of the Institute.

Members of the Institute of Metals are invited to participate in this meeting on the same basis as members of the Iron and Steel Institute.

Detailed Programme

Morning Session

10.0 a.m. Opening remarks by the Chairman.

10.05 a.m. (i) Joint discussion on:

"Tests on the Corrosion of Buried Iron and Steel Pipes", by J. C. HUDSON and G. P. ACOCK.

"Investigations on Underground Corrosion", by K. R. BUTLIN, W. H. J. VERNON, and L. C. WHISKIN.

11.45 a.m. (ii) Joint discussion on:
"Cathodic Protection", by K. A. SPENCER.
"Cathodic Protection of Buried Metal Structures", by M. R. DE BROUWER.
1.30 p.m. Buffet Luncheon in the Institute Library.

Afternoon Session

2.30 p.m. (iii) Joint discussion on:
"Corrosion of Buried Copper and Ferrous Strip in Natural and Salted Soils", by G. MOLE.
"Tests on the Corrosion of Buried Aluminium, Copper, and Lead", by P. T. GILBERT and F. C. PORTER.
4.30 p.m. Conclusion of the Meeting.

Charges

Admission: There will be no charge for admission to the Meeting, but intending participants are requested to complete PART A of a Reply Form to be obtained from the Secretary of the Iron and Steel Institute.

Papers: The papers presented and the discussion at the Meeting will be issued as a single bound volume (No. 45 in the Special Report Series of The Iron and Steel Institute) the published price of which will be 15*s.* 0*d.* (post free).

Orders received before the Meeting, if accompanied by a remittance, will be supplied at the reduced rate of 10*s.* 0*d.* (post free), and one set of advance copies of the papers will be provided in respect of each volume so ordered, without extra charge. Advance copies will not be supplied separately, nor will more than one set be provided in respect of each bound volume ordered before the Meeting.

Requests for bound volumes (and preprints) should be made not later than 13 October 1951.

Buffet Luncheon: The charge for the Buffet Luncheon will be 6*s.* 0*d.* per person.

Remittances: The appropriate remittances should accompany the Reply Forms, which may be obtained from The Secretary, The Iron and Steel Institute, 4 Grosvenor Gardens, London, S.W.1.

Société Française de Métallurgie

The Annual Autumn meeting of the Société Française de Métallurgie will be held from 22 to 27 October at the Maison de la Chimie, 28 rue St. Dominique, Paris 7e. During the course of the meeting the Osmond Medal will be presented to Professor E. N. da C. Andrade, F.R.S., Director of the Royal Institution.

The Chemical Society Research Fund

The Research Fund of the Chemical Society provides grants for the assistance of research in all branches of Chemistry. About seven hundred pounds per annum is available for this purpose, the income being derived from a donation of the Worshipful Company of Goldsmiths, from the Perkin Memorial Fund, and from other sources.

Applications for grants will be considered in November next, and should be submitted on the appropriate form not later than Thursday, 1 November 1951. Applications from Fellows will receive prior consideration.

Forms of application, together with the regulations governing the award of grants, may be obtained from the General Secretary, The Chemical Society, Burlington House, Piccadilly, London, W.1.

OTHER NEWS

Metals Economy Advisory Committee

The Minister of Supply, in conjunction with the Lord Privy Seal as Minister of Materials, has appointed an advisory committee on metals economy to help him to ensure the most economical use of metals in the engineering industry and in the defence programme.

Mr. D. A. OLIVER, Director of Research to the B.S.A. Group of Companies, who recently became metals economy adviser to the Minister, is chairman of the committee.

Members are drawn from industry and Government departments. The industrial members are: Mr. G. L. BAILEY, British Non-Ferrous Metals Research Association; Mr. H. A. R. BINNEY, British Standards Institution; Mr. H. H. BURTON, English Steel Corporation, Ltd.; Mr. W. C. F. HESSENBERG, British Iron and Steel Research Association; Mr. E. W. GRINHAM, Standard Motor Co., Ltd.; Dr. IVOR JENKINS, General Electric Co., Ltd.; DR. L. B. PFEIL, The Mond Nickel Co., Ltd.; and Dr. C. J. SMITHELLS, The British Aluminium Co., Ltd. The secretary is Mr. K. M. MCLEOD, of the engineering industries division of the Ministry of Supply.

The terms of reference of the committee are: "To bring under review, in consultation with the various Government and industrial authorities concerned, ways of economizing in the use of scarce metals in the design, specification, and the manufacturing process of metal goods for both rearmament and civil purposes, and to advise the Government how it can best assist in promoting such developments."

As measures of economy in non-ferrous metals have an effect on, and are affected by, questions of supply of these metals, the committee will report to the Minister of Materials as well as to the Minister of Supply.

Courses in Applied X-Ray Diffraction and Industrial Radiography

Two courses of 30 lectures each are being given during the winter months at the Northampton Polytechnic, St. John Street, London, E.C.1.

The first course, to be given by Mr. A. E. De Barr, is intended to give graduate or Higher National Certificate students an introduction to the fundamental principles and practical technique of X-ray diffraction, with particular reference to industrial applications. The course, the fee for which is 30*s.*, will be held from 7.0 to 9.30 p.m. on Mondays, beginning on 24 September. Additional laboratory work can be taken by arrangement.

The second course, to be given by Dr. R. J. Barnes, will provide a survey of principles and practice for those engaged in industrial radiography. The fee is 30*s.*, and the lectures will be from 7.0 to 9.30 p.m. on Tuesdays, beginning on 25 September.

Advanced Course in Applied Physics

A course of twelve post-graduate lectures is to be given at the Harrow Technical College, Station Road, Harrow, on Fridays at 7.30 p.m.

The subjects to be dealt with are: (1) "Industrial Radiography", by Dr. L. Mullins (5, 12, 19 October); (2) "Photography Applied to Nuclear Physics", by Dr. R. H. Herz (26 October, 2, 9 November); (3) "The Measurement of Colour", by Mr. R. W. G. Hunt (16, 23, 30 November); and (4) "Electron Optics", by Mr. B. J. Mayo (7, 14, 21 December).

The fee for the full course is 30*s.*; for three lectures, 10*s.*

Course on Quantum Theory of Metals

Professor C. A. Coulson, F.R.S., is to give a course of six lectures on "Quantum Theory of Metals" at the Sir John Cass College, Jewry Street, Aldgate, London, E.C.3. The lectures will be from 6 to 7 p.m. on successive Tuesdays, beginning on 30 October. The fee for the course is 15*s*. Application for enrolment should be made to the Principal.

Course on Crystal Physics

The Sir John Cass College, Jewry Street, Aldgate, London, E.C.3, is holding a special course of ten lectures on Crystal Physics. The lecturer is Mr. L. A. Thomas of the Research Laboratories of the General Electric Co., Ltd., who will treat both theoretical and experimental properties of the crystalline state. The course, the fee for which will be 25*s*, will be given at 6 p.m. on Thursdays, beginning on 4 October.

DIARY

The Institute

17 and 18 October. General Meeting, London. For details see pp. 10–11.

Local Sections

4 October. London. "Pressure Welding", by R. F. Tylecote. (4 Grosvenor Gardens, London, S.W.1, at 7 p.m.)

8 October. Scottish. Visit to the works of Henry Wiggin and Co., Ltd., Thornliebank.

9 October. Oxford. "What is a Dislocation?" by Dr. B. A. Bilby. (Physical Chemistry Laboratory, South Parks Road, Oxford.)

9 October. South Wales. "Metallurgical Problems of Atomic Energy", by Dr. H. M. Finniston. (Metallurgy Department, University College, Swansea, at 6.30 p.m.)

15 October. Sheffield. "Radioactive Tracers in Metallurgy", by Dr. H. M. Finniston. Joint meeting with the Sheffield Society of Engineers and Metallurgists. (The University, St. George's Square, Sheffield 1, at 7.30 p.m.)

23 October. Sheffield. Lecture by Dr. P. A. Taylor. Joint meeting with the Sheffield Metallurgical Association. (Grand Hotel, Sheffield, at 7 p.m.)

25 October. Birmingham. Debate: "That in the opinion of this House further encroachment of Metal Physics into the sources of instruction would be detrimental to training in Metallurgy". Opening speakers: Dr. J. W. Jenkin and Mr. H. W. G. Hignett. (James Watt Memorial Institute, Great Charles Street, Birmingham 3, at 7 p.m.)

Other Societies

10 October. Manchester Metallurgical Society. Presidential Address, by A. B. Ashton. (Engineers' Club, Albert Square, Manchester, at 6.30 p.m.)

12 October. Liverpool Metallurgical Society. "The Problem of the High-Temperature Oxidation of Metals", by Professor A. Preece. (Lecture Theatre, Electricity Service Centre, Whitechapel, Liverpool, at 7 p.m.)

24 October. Manchester Metallurgical Society. "Recent Developments in Electrically Welded Chains", by Dr. H. O. Smerd. (Engineers' Club, Albert Square, Manchester, at 6.30 p.m.)

26 October. Chemical Society. "Some Aspects of Oxidation and Corrosion", by Dr. U. R. Evans. Joint Meeting with the Birmingham University Chemical Society. (Chemistry Lecture Theatre, The University, Birmingham 15, at 4.30 p.m.)

26 October. Institution of Mechanical Engineers. "The Principles of Continuous Gauge Control in Sheet and Strip Rolling", by W. C. F. Hessenberg and R. B. Sims. (The Institution, Storey's Gate, London, S.W.1, at 5.30 p.m.)

APPOINTMENTS VACANT

CHEMISTS AND METALLURGISTS are invited by the Ministry of Supply to apply for the following appointments in the EXPERIMENTAL OFFICER class at a Research Establishment in Berkshire.

Post 1. (Ref. F.591/51/A) Metallurgist with research experience in electro-deposition or in the investigation of the properties of metallic films and coatings. Experience in the preparation of microscopical specimens would be an advantage. Candidates should possess a Higher National Certificate or equivalent qualification in metallurgy.

Post 2. (Ref. F.592/51/A) Physical chemist or physicist with interest and preferably experience in work on ceramic materials. Candidates should have a minimum qualification of Higher School Certificate with chemistry as a principal subject, but higher qualifications and relevant experience would be an advantage.

Salary will be determined on age and on an assessment of the successful candidate's qualifications and experience within the ranges: Senior Experimental Officer (minimum age 35) £742 to £960; Experimental Officer (minimum age 28) £545 to £695. Rates for women somewhat lower. Posts are unestablished.

Selected candidates may be required to work elsewhere for a short time before taking up duty in Berkshire. Housing accommodation may be available later. Application forms obtainable from Ministry of Labour and National Service, Technical and Scientific Register (K), York House, Kingsway, London, W.C.2, quoting appropriate reference number. Closing date 15 October 1951.

CHEMISTS, METALLURGISTS, AND PHYSICISTS are invited by the Ministry of Supply to apply for the following appointments in the SCIENTIFIC OFFICER CLASS at a Research Establishment near London and (for one of the posts under 1) the Royal Aircraft Establishment, South Farnborough, Hants.

1. (Ref. F.582/51/A) Physical Metallurgists (3) for the determination of thermal and physical properties of metals and alloys. Research experience of metallography, electron microscopy, or X-ray or electron-diffraction techniques would be an advantage.

2. (Ref. F.583/51/A) Physical chemist or physicist with an interest in metallurgy or ceramics, for research investigations connected with the preparation of novel ceramic materials.

3. (Ref. F.584/51/A) Physical Chemist or physicist for work on surface phenomena and for research investigations into the properties of metallic films and coatings. Experience of electron-diffraction techniques or of electrochemistry would be an advantage.

Candidates must have a 1st or 2nd class honours degree in appropriate subject or equivalent qualification. For the senior posts they must be at least 26 years of age and have had at least 3 years' post-graduate research experience. Salary will be determined on age and on an assessment of the successful candidates qualifications and experience within the ranges: Senior Scientific Officer £720–£910; Scientific Officer £380–£620. Rates for women somewhat lower. Posts are unestablished but carry benefits of F.S.S.U. Application forms obtainable from Ministry of Labour and National Service, Technical and Scientific Register (K), York House, Kingsway, London, W.C.2, quoting appropriate reference number. Closing date 15 October 1951.

GRADUATE, preferably with a good Honours degree in Metallurgy, is required for research and development work on magnetic materials. Preference will be given to men with 2–3 years' research experience. Apply to the Staff Manager (Ref. GBLC/814) Research Laboratories of The General Electric Co., Ltd., East Lane, North Wembley, Middlesex, stating age, experience, and qualifications.